

**State of Wisconsin**  
**Broadband Technology Opportunities Program (BTOP) Grant Application**  
**Submitted August 19, 2009**

***Building the Future:***  
***Wisconsin's Education and Library Broadband Infrastructure Project***

The information below is from the four-page Executive Summary of the federal BTOP grant submitted in August 2009 by the state Department of Administration (DOA). On February 17, 2010, the federal Department of Commerce announced that the grant had been funded. The Department of Public Instruction assisted DOA in writing the grant and more information is on the DPI website at <http://dpi.wi.gov/pld/arrabbfunding.html>. If you have any questions, contact Bob Bocher, DPI Technology Consultant (608-266-2127, [robert.bocher@dpi.wi.gov](mailto:robert.bocher@dpi.wi.gov)).

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***Project Description.*** The State of Wisconsin, Department of Administration, will install optical fiber to key underserved community anchor institutions: 82 education facilities and 385 public libraries. We believe that fiber is the best solution to address the current and long-term broadband needs of these institutions. This effort will enhance the existing BadgerNet Converged Network (BCN) serving over 2,400 public sector institutions and it will further facilitate broadband access for residential and business customers too.

***Opportunity the grant seeks to address.*** The State of Wisconsin BTOP grant application provides a unique opportunity to address the critical broadband needs of our key community anchor institutions. Specifically, we are seeking funds to install fiber broadband technology to 467 sites. These are:

- 74 of the state's 426 school districts that do not have fiber
- 385 of the state's 470 public libraries and branches that do not have fiber, and
- 8 community colleges.

Eighty-one percent of these institutions are in rural locations where telecommunication providers are not likely to provision fiber in the near future because of an insufficient market to justify the cost. Therefore, installing fiber would be impossible but for a timely infusion of federal stimulus funds. Our proposal to bring fiber to these schools and libraries in predominantly rural communities addresses a key purpose of the broadband language in the American Recovery and Reinvestment Act.

The community anchor institutions in this proposal now receive broadband access over a limited copper infrastructure via our statewide BadgerNet Converged Network. (Many BadgerNet customers already have fiber. We are addressing the schools and libraries that do not.) The BCN is provided under a state contract with AT&T as the prime contractor partnering with the Wisconsin BadgerNet Access Alliance, a partnership of over seventy independent telecommunication companies. The BCN provides broadband connectivity to 2,400 state and local government agencies, higher education, health care facilities, K-12 schools and public libraries. This "converged" network supports voice, video and data services. BadgerNet represents a very successful public-private partnership and according to AT&T it is the largest state network of its type in the nation.

Wisconsin has been forward thinking and diligent in developing its broadband networking infrastructure. When the business and technical specifications were developed for the BCN in 2003, Governor Doyle required that: (1) Economic development objectives be incorporated into the network, and (2) The State of Wisconsin be the anchor tenant. This requirement is addressed in the *Wisconsin Educational Network Business Case*, a comprehensive 91 page document that provided the roadmap for future development of BadgerNet. Two of the key conclusions reached in the Business Case are:

1. Wisconsin needs a standards-based, affordable network with adequate bandwidth that can support multiple applications and provide universal connectivity to accommodate increasing demand.
2. Equity of access for all students regardless of age, geography or economic status is needed. Wisconsin has made a good start in its goal to provide equity to all students, but it must continue forward to complete that mission.

The last sentence above is critical. Through state and local initiatives the State of Wisconsin has managed to bring fiber connectivity to many school districts. However, until we can ensure that the students and library patrons in *all* communities in Wisconsin have equitable access, a large part of our state is in danger of being left behind simply because of where people live.

***Proposed services and applications.*** Through a program called BadgerLink, all our schools and libraries have free (state funded) web access to over 10,000 full-text magazines, newspapers and high quality videos on scores of subjects like personal finance and health care. This rich information resource requires substantial bandwidth which is not possible on limited copper circuits. Wisconsin is also a leader in offering interactive distance education courses, but school districts without fiber cannot take full advantage of this service.

***Type of broadband system that will be deployed.*** The BadgerNet Converged Network is an Internet Protocol/Multi-Protocol Label Switching (IP/MPLS) broadband network supporting voice, video and data with over 2,400 end points covering the entire state. Of these end points, over 900 are schools, libraries and colleges, many of which already have fiber. Our project is targeted at the 467 that still do not.

***Applicant qualifications demonstrating ability to implement and operate a broadband infrastructure.*** The State of Wisconsin, in cooperation with our prime contractor AT&T and their telecommunication partners, can readily implement and operate the proposed expansion of the BCN broadband network. Since 2005, the State has been using existing contracts and service level agreements for network governance, management and other services.

***Overall infrastructure cost of the broadband system.*** The projected cost of the program is \$28.7 million to provide fiber broadband connectivity to 467 additional schools, libraries and colleges on BadgerNet.

***Overall expected subscriber projections for the project.*** Because this grant application is targeted at community anchor institutions, it emphasizes completing Wisconsin's commitment to providing high-speed broadband access to schools and libraries. This project will expand the fiber infrastructure serving the state to over 380 communities which represent a significant portion of the state's population, especially outside the larger urban areas.

### ***In Summary***

Our project addresses the critical current and future bandwidth needs of our schools and libraries on the BadgerNet Converged Network. The fiber that will be installed at these 467 sites will get our schools and libraries to the future, faster.

- *We have completed the engineering to bring fiber to 467 schools and libraries.*
- *We have completed the budget and all the logistics.*
- *We have proposed an aggressive timeline to make all this happen within 16 months of grant approval.*
- *We have worked for months on this project in close partnership with AT&T and its telecommunication partner companies.*

***The State of Wisconsin project is shovel-ready.  
When our application is approved, we are ready to start implementation.***